

2. Amendments to the Claims.

- 1 1. *(currently amended)* Lightweight, structurally integral, and strong composite rack
2 shelving, comprising:
- 3 **a)** a shelf;
- 4 **b)** **a border; and**
- 5 **c)** **inserts;**
- 6 wherein said shelf comprises a honeycomb core;
- 7 wherein said shelf comprises an upper skin;
- 8 wherein said shelf comprises a lower skin;
- 9 wherein said honeycomb core of said shelf is sandwiched between said upper skin of
10 said shelf and said lower skin of said shelf so as to form a composite structure;
- 11 wherein said composite structure of said shelf is lightweight;
- 12 wherein said composite structure of said shelf is strong;
- 13 wherein said shelf has a plurality of through bores;
- 14 wherein said plurality of through bores pass vertically through said shelf; **and**
- 15 wherein said plurality of through bores through said shelf allow flames under said shelf
16 to pass upwardly therethrough instead of sidewardly therealong whereby an
17 extinguishant thereabove can pass downwardly therethrough for extinguishing flames
18 thereunder;

19 wherein said shelf has a periphery;
20 wherein said border closes off said periphery of said shelf;
21 wherein said honeycomb core of said shelf comprises walls;
22 wherein said walls of said honeycomb core of said shelf define cells;
23 wherein said border is a tape;
24 wherein said tape of said border is affixed to any wall of said honeycomb core of
25 said shelf that it comes in contact with, especially any defining an open cell of said
26 honeycomb core of said shelf located at said periphery of said shelf so as to
27 maintain structural integrity of said shelf by closing off any open cell of said
28 honeycomb core of said shelf located at said periphery of said shelf and form a
29 structurally integral unit with said shelf, and which folds over to be affixed to
30 said upper skin of said shelf and said lower skin of said shelf;
31 wherein said inserts line said plurality of through bores through said shelf,
32 respectively;
33 wherein said inserts are tapes;
34 wherein said tapes of said inserts are affixed to any wall of said honeycomb core
35 of said shelf that they come in contact with, especially any defining an open cell
36 of said honeycomb core of said shelf caused by a through bore through said shelf
37 so as to maintain structural integrity of said shelf by closing off any open cell of
38 said honeycomb core of said shelf caused by a through bore through said shelf

39 **and form a structurally integral unit with said shelf, and which fold over to be**
40 **affixed to said upper skin of said shelf and said lower skin of said shelf.**

1 2. *(original)* The shelving as defined in claim 1, wherein said shelf has a surface area; and
2 wherein said plurality of through bores through said shelf occupy approximately 50%
3 of said surface area of said shelf.

3-7. *(canceled)*

1 8. *(currently amended)* An improved rack system of the type having columns, beams
2 interconnected to the columns, and shelving supported by the beams, said
3 improvement comprising:
4 a) the shelving being lightweight;
5 b) the shelving being structurally integral;
6 c) the shelving being strong;
7 d) the shelving comprising a shelf;
8 e) said shelf comprising a honeycomb core;
9 f) said shelf comprising an upper skin;
10 g) said shelf comprising a lower skin;

- 11 h) said honeycomb core of said shelf being sandwiched between said upper skin
12 of said shelf and said lower skin of said shelf so as to form a composite
13 structure;
- 14 i) said composite structure of said shelf being lightweight;
- 15 j) said composite structure of said shelf being strong;
- 16 k) said shelf having a plurality of through bores;
- 17 l) said plurality of through bores passing vertically through said shelf; **and**
- 18 m) said plurality of through bores through said shelf being for allowing flames
19 under said shelf to pass upwardly therethrough instead of sidewardly
20 therealong and an extinguishant thereabove to pass downwardly therethrough
21 and extinguish the flames thereunder;
- 22 **n) said shelf having a periphery;**
- 23 **o) the shelving comprising a border;**
- 24 **p) said border closing off said periphery of said shelf;**
- 25 **q) said honeycomb core of said shelf comprising walls;**
- 26 **r) said walls of said honeycomb core of said shelf defining cells;**
- 27 **s) said border being a tape;**
- 28 **t) said tape of said border being affixed to any wall of said honeycomb core**
29 **of said shelf that it comes in contact with, especially any defining an open**
30 **cell of said honeycomb core of said shelf located at the periphery of said**

31 shelf so as to maintain structural integrity of said shelf by closing off any
32 open cell of said honeycomb core of said shelf located at the periphery of
33 said shelf and form a structurally integral unit with said shelf, and which
34 is folded over to be affixed to said upper skin of said shelf and said lower
35 skin of said shelf;
36 u) the shelving comprising inserts;
37 v) said inserts lining said plurality of through bores through said shelf,
38 respectively;
39 w) said inserts being tapes; and
40 x) said tapes of said inserts being affixed to any wall of said honeycomb core
41 of said shelf that they come in contact with, especially any defining an
42 open cell of said honeycomb core of said shelf caused by a through bore
43 through said shelf so as to maintain structural integrity of said shelf by
44 closing off any open cell of said honeycomb core of said shelf caused by a
45 through bore through said shelf and form a structurally integral unit with
46 said shelf, and which are folded over to be affixed to said upper skin of
47 said shelf and said lower skin of said shelf.

- 1 9. (original) The improved rack system as defined in claim 8, wherein said shelf has a
2 surface area; and

- 3 wherein said improvement comprises said plurality of through bores through said shelf
4 occupying 50% of said surface area of said shelf.

10-14. *(canceled)*